Student Name:
School Name:
Teacher/Class:

Montana Comprehensive Assessment System (MontCAS, Phase 2 CRT)

Grade 5
Common Released Items
Spring 2008

OPI

OFFICE OF PUBLIC INSTRUCTION

SECURE MATERIALS. MAY NOT BE DUPLICATED.

General Directions

This test contains six sessions: three in reading and three in mathematics. The sessions are made up of multiple-choice questions and questions for which you must show your work or write out your answers. Write your answers to all of the questions in your Student Response Booklet. For the reading parts of the test, read each selection before answering the questions.

For each multiple-choice question, choose the best answer. Fill in the bubble in your Student Response Booklet that corresponds to your answer choice for that question.

Some questions ask you to show your work or to write out your answers. Write your answers to these questions in the spaces provided in your Student Response Booklet. Your answers must fit in the spaces provided. Any part of an answer outside the box might not be scored.

Be sure to answer all parts of each question, and to answer completely. For example, if a question asks you to explain your reasoning or show your work, be sure to do so. You can receive points for a partially correct answer, so try to answer every question.

Reading
Session 1

This test session includes a reading selection, multiple-choice questions, and a question for which you must write out your answer. After you read the selection, answer the questions about it in the spaces provided in your Student Response Booklet. You may not use a dictionary or any other reference tool during this session.

Not all houses are built with the same materials. Read this article about earthen bricks and then answer the questions that follow.

Mud-Pie* Palaces

by Judith G. Keusler

WHAT DO THE Great Wall of China, the Mission San Juan Capistrano, and the American pioneer sod house have in common? They all have mud walls!

Adobe, sod, rammed earth, and puddled mud are all forms of earthen brick. Since this natural building material has been used in almost every country in the world, variations have emerged to make it suitable to different climates. For example, sod bricks were often used in home construction in the extreme climatic conditions of the prairie states. Adobe bricks, on the other hand, were more suited to dry, hot climates because they require several
2 days to cure in the sun. Adobe would not be a suitable building material where it is cool and damp. In rainy climates, damp earth is packed into forms and referred to as rammed earth. Earlier portions of the Great Wall of China were built using a form of

*Mud-Pie: a mass of mud that has been molded into the shape of a pie

Please go on to the next page.

rammed-earth construction. Damp earth can also be hand-shaped to create a wall (puddled mud).

Although there are differences, all of these methods utilize the same basic materials: dirt and water.

Adobe bricks, which are mud with sand and straw added, have been used for centuries to construct everything from the poorest hut to magnificent mansions. Indian tribes in New Mexico and Arizona constructed whole adobe villages called pueblos from this material, and churches, schools, and missions have all been constructed with adobe brick. Adobe is inexpensive and environmentally friendly, it does not require expensive equipment, it does not burn easily, and there is an endless supply of building material right under our feet.

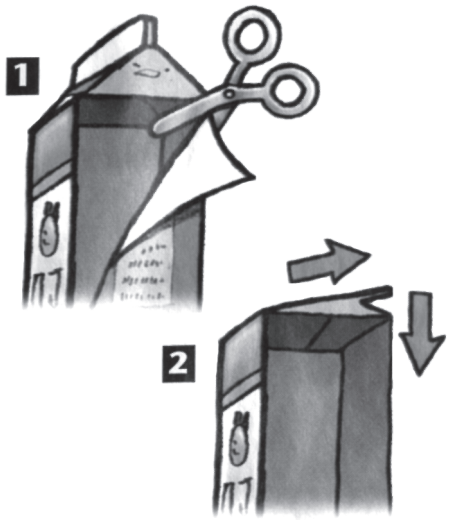
Building an entire house with adobe bricks is long and tedious work. But making one adobe brick can be a fun project, and the materials needed are inexpensive and easy to find. So roll up your sleeves and make your own adobe brick—just as the American pioneers and Native American tribes did long ago!

What You'll Need:

half-gallon orange-juice or milk carton (the waxed-cardboard rectangular kind)
scissors
tape
a gallon bucket
dirt
sand
straw or dried grass
a stick
water

What to Do:

1. Take empty half-gallon orange-juice carton and cut one long side from it.
2. Cut and flatten the folded spout end, then tape the carton firmly into a rectangular shape.
3. Fill the bucket $\frac{1}{2}$ full of dirt.
4. Add sand until the bucket is $\frac{3}{4}$ full.
5. Add straw or dried grass (approximately $\frac{1}{8}$ bucket) cut into 2- to 3-inch pieces.
6. Thoroughly mix the dry materials with a wooden stick that will comfortably reach to the bottom of the bucket.
7. Add enough water to make a doughlike consistency. Add the water a little at a time until you can easily work with the mixture.
8. Pack the brick mixture into the carton, filling it about $\frac{2}{3}$ full.
9. When your brick is firm enough to maintain a brick shape (approximately 1 day), carefully remove it from the carton.
10. Place your brick in a dry, sunny place and turn it occasionally as it dries. A completely dry brick is uniform in color, inside and out. The drying process, called curing, may take several weeks.



The amounts of dirt, sand, straw or dried grass, and water may vary widely, depending on the type of soil you have. For example, if you have soil with high clay content, you may need to add more sand or straw. If your first brick is not as strong as you'd like or it cracks when it dries, adjust the amount of materials and try again. Finding the right mixture for your area is part of the challenge that adobe builders have faced for centuries.

Please go on to the next page.

Mark your answers in the section marked "Reading—Session 1" in your Student Response Booklet.

15. In paragraph 2, the word cure means to

    A. dry.
    B. mix.
    C. clean.
    D. remove.

16. In a cool, damp climate a house made of adobe bricks would likely

    A. be stronger.
    B. be warmer.
    C. take a long time to build.
    D. take a long time to dry.

17. In paragraph 3, the author uses the phrase "building material right under our feet." In which sentence does the word right have the same meaning as in this phrase?

    A. The boy had the right to share his opinion.
    B. The girl turned right on to Market Street.
    C. The girl believed she had the right answer.
    D. The boy watched the bird fly right over him.

18. In the directions, what should be done before adding liquid to the dry materials?

    A. The materials should be mixed.
    B. The materials should be sorted.
    C. The brick should be dried.
    D. The brick should be turned.

19. Why are sand and straw **most likely** added to mud when adobe bricks are made?

    A. to make the bricks stronger
    B. to make the bricks cheaper
    C. to make the bricks bigger
    D. to make the bricks interesting

20. What is the **main** purpose of the sections "What You'll Need" and "What to Do"?

    A. to show that there are two basic materials
    B. to help make the directions easy to follow
    C. to help readers build an entire adobe house
    D. to show two different ways to make adobe bricks

Please go on to the next page.

21. What might happen if a person did **not** add the water a little at a time?

A. The carton would not fill correctly.
B. The bricks would not stack correctly.
C. The materials would not dry correctly.
D. The mixture would not blend correctly.

22. When making an adobe brick, the rectangular orange-juice carton is necessary to

A. keep the brick moist.
B. mold the brick shape.
C. heat the brick evenly.
D. color the brick orange.

23. If a brick cracks while it dries, what should be done when making the next brick?

A. Mix the materials in a larger bucket.
B. Dry the brick for a shorter period of time.
C. Change the amount of materials being used.
D. Stir the materials for a longer period of time.

24. According to the last paragraph, what determines the amount of materials used in the adobe brick project?

A. the type of soil
B. the shape of brick
C. the amount of stirring
D. the temperature of water

25. This article is an example of

A. fiction.
B. a biography.
C. nonfiction.
D. a drama.

26. To find a definition for the word "adobe," the **best** source would be

A. a newspaper.
B. a dictionary.
C. an atlas.
D. an encyclopedia.

Write your answer in the space provided for it in your Student Response Booklet.

27. Explain the advantages and disadvantages of building with adobe bricks. Use information from the article to support your answer.

Please STOP. Do not go on to the next page.

Reading
Session 2

This test session includes reading selections and multiple-choice questions. After you read each selection, answer the questions about it in the spaces provided in your Student Response Booklet. You may not use a dictionary or any other reference tool during this session.

Read this poem and then answer the questions that follow.

Open Range

Prairie goes to the mountain,
  Mountain goes to the sky.
The sky sweeps across to the distant hills
And here, in the middle,
  Am I.

Hills crowd down to the river,
  River runs by the tree.
Tree throws its shadow on sunburnt grass
And here, in the shadow,
  Is me.

Shadows creep up the mountain,
  Mountain goes black on the sky,
The sky bursts out with a million stars
And here, by the campfire,
  Am I.

—Kathryn and Byron Jackson

Please go on to the next page.

Mark your answers in the section marked "Reading—Session 2" in your Student Response Booklet.

28. In line 3, the word sweeps suggests that

A. a cloud is moving across the sky.
B. the sky seems to stretch a long way.
C. a wind is blowing through the sky.
D. the sky keeps changing all the time.

29. In lines 5 and 15, the poets use the phrase "Am I." In line 10, what is the **most likely** reason the poets use the phrase "Is me" instead of the phrase "Am I"?

A. to show the speaker is a different person
B. to make the line rhyme with line 7
C. to change the mood of the poem
D. to create a difference from lines 5 and 15

30. Line 12 **most likely** means that

A. the night is coming.
B. the mountain is changing.
C. the fire is getting larger.
D. the sky is getting brighter.

31. In the poem, words such as "sweeps," "crowd," "throws," and "creep" are used to

A. make the sky seem stormy.
B. make nature seem human.
C. make the mountain seem large.
D. make nighttime seem endless.

32. How does the setting of the poem change from the beginning to the end?

A. It begins on a prairie and ends in a city.
B. It begins on a mountain and ends at a river.
C. It begins in the evening and ends at noon.
D. It begins in the daytime and ends at night.

33. Based on the poem, the speaker **most likely** feels

A. important.
B. sad.
C. small.
D. bored.

34. What is the **main** purpose of the poem?

A. to tell a story about camping
B. to describe the speaker's connection with nature
C. to warn campers about possible danger
D. to inform readers about prairie life

Please go on to the next page.

Read this passage about Jell-O. Then answer the questions that follow.

Jell-O

by Webb Garrison

P. B. Wait was a cough syrup manufacturer in LeRoy, New York, whose business was not going very well.

So he decided to give up the cough syrup business and branch out into something new.

He picked the food industry. People eat all the time, he reasoned, while they take medicine only when they are sick.

For many years food manufacturers had experimented with gelatin, which is made from animal bones, but no one had been able to come up with a gelatin that was appealing. Gelatin looked bad, and it didn't taste very good, either.

So Mr. Wait went to work. His answer was to add fruit syrup to gelatin. He named his new product "Jell-O."

The new business had no competition, but, unfortunately, not enough people wanted to try Jell-O. So Wait ended up by selling out to a cereal manufacturer.

Later the cereal man tried to sell the Jell-O business, reportedly for only $35. And no one was interested in buying it!

About 1900 a number of cooking experts discovered Jell-O and decided it was just the thing for an elegant
8 meal. That changed everything. Jell-O began to appear at banquets and fancy dinners. Today, Jell-O is known worldwide as a bona fide American food.

Jell-O through the Years

1897	Pearle B. Wait develops a fruit-flavored gelatin. The name "Jell-O" is given to the treat by his wife, May Davis Wait. The first flavors are strawberry, raspberry, orange, and lemon.
1899	Wait sells the business to a neighbor.
1904	Through advertisements, the Jell-O girl is introduced as the brand's first trademark. Two new flavors, chocolate and cherry, are added to the original four flavors.
1909	The Genesee Pure Food Company posts sales earnings of over a million dollars. Four years later, that number doubles.
1912	A booklet featuring six of the most famous American cooks and their Jell-O recipes is produced.
1923	The Genesee Pure Food Company officially changes its name to the "Jell-O Company."
1936	The Jell-O brand expands by introducing Jell-O chocolate pudding.
1946	A shortage of Jell-O is experienced as sugar becomes scarce in the United States.
1971	Jell-O pudding treats are introduced.

Jell-O Trivia

- During the early quarter of the 20th century, immigrants entering Ellis Island in New York City were served Jell-O gelatin as a "Welcome to America" treat.
- During an air show at the Woodward Airport, one of the contests involved having the pilot land the plane, run up to a table and eat a bowl of Jell-O, and then run back to the plane and take off.
- The people in Salt Lake City consume more lime-flavored gelatin than people in any other city in the United States.
- During a 140-day mission to the Russian Mir space station, astronaut Shannon Lucid announced that she keeps track of the days by allowing herself to eat Jell-O each Sunday.

Please go on to the next page.

Mark your answers in the section marked "Reading—Session 2" in your Student Response Booklet.

35. Why did P. B. Wait **most likely** give up the cough syrup business?

    A. People did not buy his syrup on a regular basis.
    B. He did not think his syrup tasted good enough.
    C. He did not enjoy making cough syrup by himself.
    D. People did not think his cough syrup worked well.

36. In paragraph 8, which word gives a clue to the meaning of <u>elegant</u>?

    A. experts
    B. discovered
    C. fancy
    D. worldwide

37. The events in "Jell-O through the Years" are organized by

    A. date.
    B. importance.
    C. problem.
    D. topic.

38. How did the limited amount of sugar in the United States in 1946 **most likely** affect the Jell-O Company?

    A. The company lowered the price of Jell-O.
    B. The company developed a sugar-free product.
    C. The company produced less Jell-O.
    D. The company sold the business.

39. When did the makers of Jell-O report that they earned more than a million dollars?

    A. 1897
    B. 1904
    C. 1909
    D. 1936

Please go on to the next page.

40. Which of the following statements is an **opinion**?

A. Everybody should eat Jell-O as a healthy dessert.

B. The idea of Jell-O was sold to a cereal company.

C. The Jell-O business was named by May Davis Wait.

D. Immigrants to the United States were given Jell-O.

41. What is the **main** purpose of this passage?

A. to inform the reader about the life of P. B. Wait

B. to teach the reader how to properly make Jell-O

C. to teach the reader how to successfully run a business

D. to inform the reader about the development of Jell-O

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Reading
Session 3

No items released from this session in 2007/2008.

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Mathematics
Session 1 (No Calculator)

This test session includes multiple-choice questions and questions for which you must show your work or write out your answer. You may NOT use a calculator during this session.

Mark your answers in the section marked "Mathematics—Session 1 (No Calculator)" in your Student Response Booklet.

1. Look at the equation below.

$$\square + \square + \square = 18$$

What is the value of $\square$?

A. 3
B. 6
C. 8
D. 9

3. Which type of triangle has an angle with a measure of 90 degrees?

A. an acute triangle
B. an equilateral triangle
C. an obtuse triangle
D. a right triangle

5. Each side of a square tablecloth is 5 feet long. What is the perimeter of the tablecloth?

A. 10 feet
B. 15 feet
C. 20 feet
D. 25 feet

Please go on to the next page.

8. Isabelle uses 3 beads for each bracelet that she makes. Which chart shows the relationship between the number of bracelets Isabelle makes and the number of beads she uses?

A.

Number of Bracelets	Number of Beads
3	9
6	18
9	27
12	36

B.

Number of Bracelets	Number of Beads
9	3
18	6
27	9
36	12

C.

Number of Bracelets	Number of Beads
3	3
6	6
9	9
12	12

D.

Number of Bracelets	Number of Beads
1	4
2	8
3	12
4	16

19. At Snow School, 14 classes are selling bags of popcorn. Each class was given 320 bags of popcorn to sell. Which is **closest** to the total number of bags the classes were given to sell?

A. 3000
B. 3200
C. 4500
D. 5250

20. Rachel's batting average is 0.325, which is 0.07 more than Becky's batting average. What is Becky's batting average?

A. 0.250
B. 0.255
C. 0.318
D. 0.355

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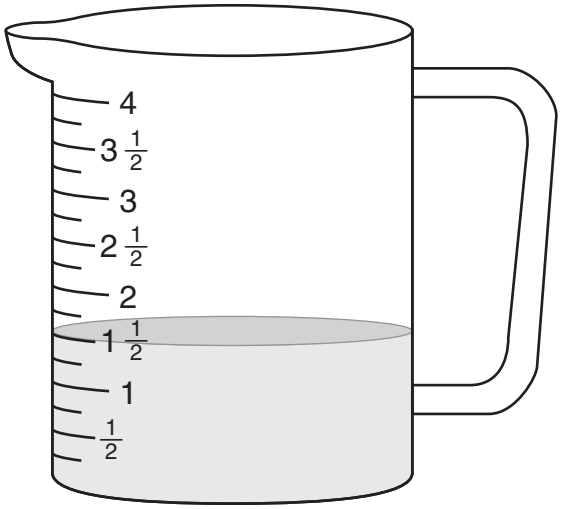
21. Kurt is making waffles. He poured $1\frac{1}{2}$ cups of milk into the measuring cup, as shown below.



Kurt wants to add $\frac{3}{4}$ cup of oil to the milk in the measuring cup. How much milk and oil will then be in the measuring cup?

A. $1\frac{4}{6}$

B. 2

C. $2\frac{1}{4}$

D. 3

Please go on to the next page.

Write your answers in the spaces provided in your Student Response Booklet. Show all of your work.

23. Compute:

$\$31 + \$4.12 - \$3.90$

24. What is the value of k in the equation below?

$16 \div k = 2$

Write your answer in the space provided for it in your Student Response Booklet. Show all of your work.

25. Parents of King School students will buy a new piece of playground equipment. The fourth- and fifth-grade students voted for the type of playground equipment they would like to have. The results are shown in the chart below.

Students' Voting Results for Playground Equipment

Equipment	Fourth Grade	Fifth Grade
Monkey bars	25	25
Basketball hoop	16	28
Soccer net	32	18

a. On the grid in your Student Response Booklet, make a double bar graph that shows the fourth- and fifth-grade students' votes for each type of playground equipment. Be sure to label your graph, provide a title, and provide a key to show which bars are fourth-grade votes and which bars are fifth-grade votes.

b. Which type of playground equipment should the parents buy? Use the data to support your reasoning.

Please STOP. Do not go on to the next page.

Mathematics
Session 2 (No Calculator)

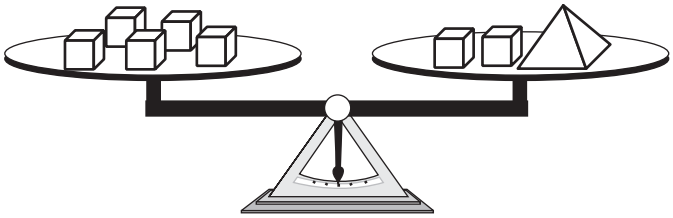
This test session includes multiple-choice questions. You may NOT use a calculator during this session.

Mark your answers in the section marked "Mathematics—Session 2 (No Calculator)" in your Student Response Booklet.

26. At 5:20 P.M., Joshua put a pie in the oven to bake. He set the timer for 45 minutes. What time will the timer go off?

A. 5:45 P.M.
B. 5:55 P.M.
C. 6:05 P.M.
D. 6:15 P.M.

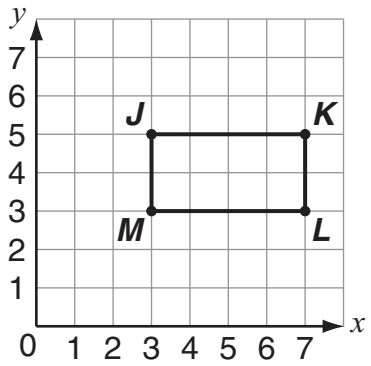
27. The scale shown below is balanced.



How many cubes weigh the same as one pyramid?

A. 2
B. 3
C. 5
D. 7

28. Kim drew a rectangle with points *J*, *K*, *L*, and *M* on a coordinate grid, as shown below.



What are the coordinates of point *J*?

A. (3, 3)
B. (3, 5)
C. (5, 3)
D. (5, 5)

Please go on to the next page.

31. Ron has a string that is $1\frac{1}{4}$ feet long. He will cut the string into two pieces. One piece will be $\frac{1}{2}$ foot long. Which expression can Ron use to find the length, in feet, of the other piece of string?

A. $1\frac{1}{4} + \frac{1}{2}$

B. $1\frac{1}{4} - \frac{1}{2}$

C. $1\frac{1}{4} \times \frac{1}{2}$

D. $1\frac{1}{4} \div \frac{1}{2}$

36. Four students measured the distance from their classroom door to the water fountain. Each student measured the distance by counting the number of heel-to-toe steps he or she walked. The chart below shows their results.

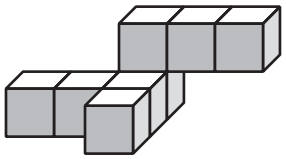
Distance from Classroom Door to the Water Fountain

Student	Number of Heel-to-Toe Steps
Aaron	25
Bailey	19
Caleb	37
Dora	21

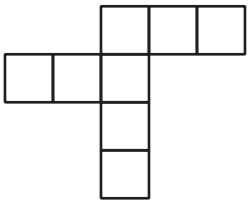
Which student has the longest foot?

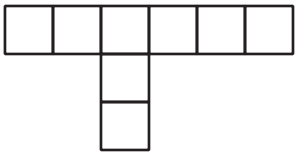
A. Aaron
B. Bailey
C. Caleb
D. Dora

37. Michael glued eight cubes together to make the figure shown below.



Which picture shows the **top** view of the figure Michael made?

A.


B.


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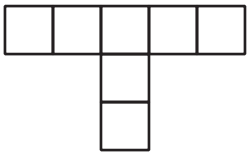

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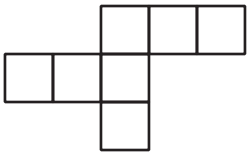

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41. Which number is a common multiple of 20 and 25?

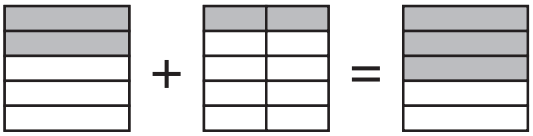
A. 5
B. 40
C. 50
D. 100

42. Which model can be used to find $\frac{2}{5} + \frac{2}{10}$?

A. 

B. 

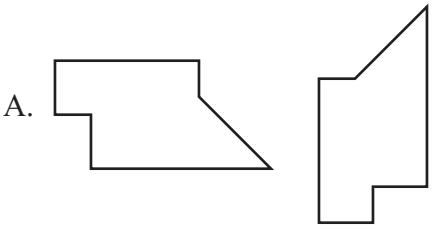
C. 

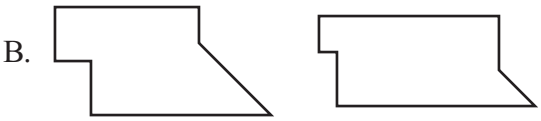
D. 

43. Vance printed 45 digital pictures. It costs $0.29 to print each picture. How much did it cost to print all the pictures?

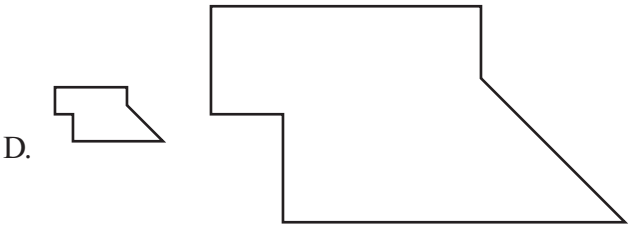
A. $ 1.31
B. $ 4.95
C. $13.05
D. $49.50

44. Which pair of figures is congruent?

A. 

B. 

C. 

D. 

46. At a potato chip factory, 4,200 pounds of potatoes are baked in a 1-hour period. Which is the **best** estimate for the number of pounds of potatoes baked in a 24-hour period?

A. 100,000
B. 112,500
C. 120,000
D. 800,000

Please STOP. Do not go on to the next page.

Mathematics
Session 3 (Calculator)

This test session includes multiple-choice questions. You may use a calculator during this session.

Mark your answers in the section marked "Mathematics—Session 3 (Calculator)" in your Student Response Booklet.

52. Last year, one million five thousand three hundred twenty-five items were checked out of a library. What numeral represents the number of items checked out of the library?

A. 15,325
B. 1,005,325
C. 1,050,325
D. 10,500,325

Please go on to the next page.

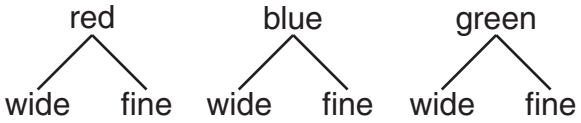
56. An art store sells markers in three different colors. Each color marker is available in three different point sizes as shown in the chart below.

Types of Markers

Colors	Red, blue, green
Types of Points	Wide, fine, regular

Which tree diagram shows all the different types of markers the art store sells?

A.


B.


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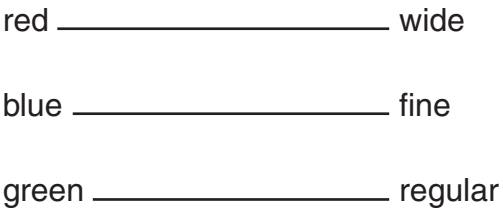
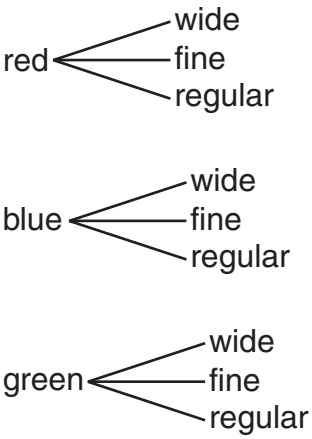
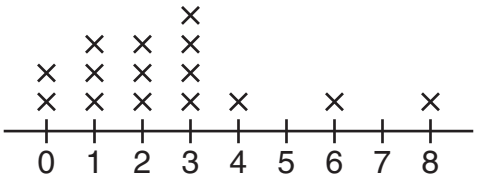


D.


60. George did a survey to find out how many brothers and sisters each of his classmates has. The line plot below shows the results of George's survey.



Number of Brothers and Sisters

What is the median number of brothers and sisters George's classmates have?

A. 2
B. 3
C. 4
D. 8

61. Rick made the input-output table shown below.

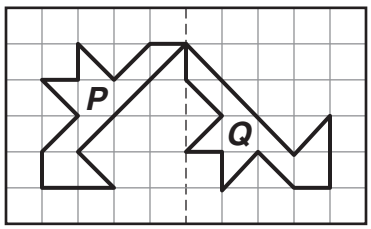
Input	Output
3	22
6	43
9	64
12	85

Which rule describes how to find the output number for an input number in Rick's table?

A. Add 3.
B. Multiply by 8, and then subtract 2.
C. Add 3, and then multiply by 5.
D. Multiply by 7, and then add 1.

Please go on to the next page.

63. Look at figure *P* and figure *Q* below.



Which motion could be used to move figure *P* to exactly cover figure *Q*?

A. a translation (slide)
B. a reflection (flip)
C. a 90° rotation (turn) clockwise
D. a 90° rotation (turn) counterclockwise

65. What is the next number in this pattern?

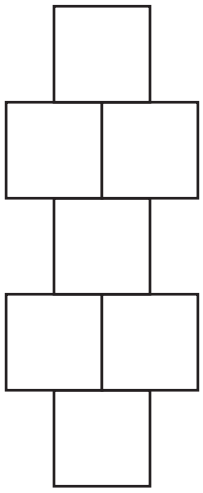
5, 15, 45, 135, 405, ?

A. 415
B. 495
C. 675
D. 1215

67. Which phrase describes a parallelogram?

A. a four-sided figure with exactly one pair of parallel lines
B. a four-sided figure with exactly two pairs of parallel lines
C. a six-sided figure with exactly three pairs of parallel lines
D. a four-sided figure with no parallel lines

68. Ms. Flower made a hopscotch figure as shown below.



Ms. Flower made the side of each square of the figure 2 feet long. What is the area of the hopscotch figure?

A. 20 square feet
B. 24 square feet
C. 28 square feet
D. 56 square feet

Please go on to the next page.

69. Jason had 4 bags of cubes with 30 cubes in each bag.

- He gave 51 cubes to a friend.
- He used the remaining cubes to make 3 towers.
- Each tower had the same number of cubes.

How many cubes did Jason use to make **each** tower?

A. 17
B. 23
C. 40
D. 57

Please STOP. STOP

Acknowledgments

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